

What is claim d is:

5 1. A catheter for installing expandable anchors into a body comprising a catheter body having a distal tip portion manipulatable by external control, said catheter being adapted to be inserted percutaneously into a body,

said distal tip portion having a central axially extending opening,

10 an axially movable hollow needle fitted within said central opening and being remotely axially moveable, from a retracted position located within said distal tip portion, to an extended position extending distally therefrom, said hollow needle having a sharp distal tip and a central opening adapted to hold at least one expandable anchor therein,

15 an axially moveable expelling member fitted within the central lumen of said hollow needle adapted to expel a expandable anchor therefrom by means of an externally actuatable control.

2. A catheter according to claim 1 wherein said distal tip assembly is steerable by means of a steering assembly actuatable by means of a steering control located in a handle connected to the proximal end of said catheter.

5 3. A catheter according to claim 1 wherein the catheter body contains a lumen adapted to feed suture material therethrough in a distal direction for connection to said expandable anchors ejected from said catheter.

5 4. A catheter according to claim 1 wherein said needle is adapted to hold said expandable anchors in a straightened configuration for insertion through tissue, said expandable anchors being returnable to a preselected nonlinear

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configuration at body temperature.

5. A catheter according to claim 1 wherein said needle and said expandable anchor expelling means are independently actuatable.

6. A catheter for installing a wire mesh member into a body comprising a catheter body having a distal tip portion manipulatable by external control, said catheter being adapted to being
5 inserted percutaneously into a body, said distal tip portion having a central axially extending opening, an axially movable annularly-shaped member fitted within said distal tip portion and being remotely axially movable from a retracted position located
10 proximally from said distal tip a distance sufficient to hold an annularly-shaped mesh member, to an extended position extending distally to the end of said catheter,

15 said annular member having a central lumen adapted to receive and allow axial movement therethrough of a second catheter, said second catheter being provided with a means at its distal tip for attaching itself to the surface of a selected body tissue member.

7. A device according to claim 6 further comprising a member on the exterior surface of said catheter, said member being adapted to anchor
5 elongated tying members secured to the end of said distal end of said annular mesh member whereby as said mesh member is ejected by said annular member the distal diameter of said mesh member is enlarged.

8. A device for insertion into body tissue to fix said tissue in a preselected orientation comprising

5 a woven wire mesh member stressed into a first generally annular shape for insertion into

10 contact with said body tissue, said mesh member having a second preselected geometrical shape different from said first stressed shape, said member being changed in geometric shape to said second preselected shape when in its unstressed condition.

9. A catheter for injecting liquid hardenable materials into a body cavity comprising an elongated catheter body having a proximal end and a distal end

5 said distal end being provided with a distal end member having a central opening therethrough,

10 at least two lumens extending axially through said catheter to said distal end portion for injecting liquids therein.

10. A device according to 9 wherein said distal tip portion has a chamber located distally from the distal ends of said lumens for mixing liquids flowing distally through said lumens.

11. A device according to claim 9 wherein a hollow helical member in fluid flow communication with said lumens is provided on the distal tip of said catheter for penetrating a tissue wall within a body.

12. A device according to claim 9 wherein said lumens are provided with a chemically inert surface on the interior thereof.

13. A device according to claim 9 wherein a remotely controllable steering member is located in said distal tip portion of said catheter said steering member being connected to a means for effecting remote articulation thereof.

14. A device according to claim 12 wherein said interior surface comprises PTFE.

15. A method fixing an atrial appendage in a position wherein the effective volume thereof is reduced comprising

5 inserting a catheter according to claim 1 into contact with a surface of said appendage,

advancing said hollow needle through the wall of said appendage,

expelling an expandable anchor through a wall of said appendage,

10 using said anchor to manipulate the tissue of said appendage to fix the same in a position wherein said appendage has a reduced effective volume.

16. A method of fixing an atrial appendage in a position of reduced effective volume comprising

inserting a mesh member into contact with a surface of said appendage,

5 said woven wire mesh member being stressed into a first generally annular shape for insertion into contact with said appendage, said mesh member having a second preselected geometrical shape different from said first stressed shape, and,

10 allowing said member to change in geometric shape to said second preselected shape by returning it to its unstressed condition.

17. A method affixing an atrial appendage in a position wherein the effective volume thereof is reduced comprising

5 inserting a catheter into contact with a surface of said appendage,

expelling liquid hardenable material into said appendage, whereby said appendage has a reduced effective volume.

18. A method according to claim 17 wherein a liquid is expelled through each of said lumens to

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said end portion, said liquids being hardenable
after mixing.

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